REMARKS

Claims 2, 3 and 8-16 are currently pending. Claim 1 has been rewritten as and replaced with new claim 14. New claim 14 also incorporates the elements of claim 5 and claim 10 and is further supported by the specification, for example on page 10, lines 10-21. Claim 4-7 have been cancelled without prejudice. Claims 2, 3 and 8-10 have been amended to correct claim dependencies and clarify the claimed subject matter. Claims 15-17 have been added and are supported by original claim 8. No new matter has been added.

Applicants respectfully request reconsideration of the Restriction Requirement as process claims 10-13 depend from elected claim 1 (rewritten as claim 14) and it would not be a burden on the Examiner to search these claims.

For the following reasons Applicants submit that the claims are allowable and request that the application be passed to issue.

Claim Objections

Claims 4-9 were objected to under 37 C.F.R. § 1.75(c) as allegedly being in improper form. Applicants respectfully submit that the claim amendments, including the cancelation of claims 4-7 and the amendment of claims 8 and 9, obviate the objections. As such, withdrawal of the objections is requested.

Claim Rejections Under 35 U.S.C. § 112, second paragraph

Claims 4-9 were rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to point out and distinctly claim the subject matter regarded as the invention. Applicants respectfully disagree. However, new claim 14 and the amendments to claim 8 obviate the rejections. Moreover, the term "low" as used in claims 14 and 9 is clearly defined in the specification. The specification clearly defines the term "low", for example page

11, lines 5-10 define the term "low density" as having "a density of at most 2.0 g/cm^3, more preferably below 1.5 g/cm^3 and most preferably below 1.0 g/cm^3;" page 14 line 15-20 define the term "low molecular weight dispersants" as "within the range of 1.000 to 2.000g/mole;" and page 14, lines 21-25 defines the term "high molecular weight dispersants" as "having a molecular weight usually within the range of from 5.000 to 30.000 g/mole." As such, the claims terms are clear from the definitions provided in the specification. Therefore withdrawal of the rejections is respectfully requested.

Claims Rejections Under 35 U.S.C. § 103(a)

Claims 1-9 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cheng (U.S. Patent No. 4,229,309). Applicants traverse this rejection.

Claim 14 recites, in pertinent part,

14. A fuel additive composition for the reduction/removal of vanadium-containing ash deposits in gas turbines and other by combustion of vanadium-containing fuel driven apparatuses, said composition comprising an active ingredient dispersed in at least one liquid selected from the group consisting of liquids soluble in oil, by means of at least one dispersant selected from the group consisting of low molecular weight dispersants and high molecular weight dispersants,

wherein said active ingredient is an inorganic oxygen-containing compound of a metal in particle, non-crystalline form,

wherein when heated in a combustion flame said active ingredient liberates a gaseous substance by evaporation and forms a corresponding metal oxide having a crystalline porous structure,

wherein dehydration and decomposition of said active ingredient takes place in the combustion process,

wherein said active ingredient comprises a compound of a metal capable of forming a vanadate with vanadium of said ash deposits, and

wherein said active ingredient and said corresponding metal oxide have a particle size distribution within the range of from 0.1 to 2 micron, and said corresponding metal oxide having a density of at most 2.0 g/cm^3.

[Emphasis added].

Applicants respectfully submit that claim 14 recites, in pertinent part that, the **"active ingredient is an inorganic oxygen-containing compound of a metal in particle, non-crystalline form, wherein when heated in a combustion flame said active ingredient liberates a gaseous substance by evaporation and forms a corresponding metal oxide having a crystalline porous structure,"** and **"dehydration and decomposition of said active ingredient takes place in the combustion process."** This configuration gives an advantage in product performance in comparison to the product in Cheng. The advantage is that formation of metal particles in the flame will be smaller and have a larger surface area due to a more rapid dehydration at higher temperatures and stronger heat radiation.

In contrast, as described in Cheng the $Mg(OH)_2$ is already dehydrated and decomposed into MgO during the manufacturing step, i.e. in a liquid phase. Then the MgO product is added to the fuel. See Cheng col. 7, lines 5-8. As such, Cheng does not teach or suggest adding the active compound to the fuel during combustion, and therefore it is not possible to produce a product with the features according to instant claim 14 by the disclosure in Cheng.

For example, as explained in Examples 1 and 2 in the specification, when a metal hydroxide such as magnesium hydroxide ($Mg(OH)_2$) in particle form (non-crystalline form) is heated, water leaves the crystal and metal oxide is formed, (in the examples magnesium oxide (MgO) is formed). When this is done during combustion of the fuel in a hot flame, the fast evaporation of water cracks the crystals into even smaller particles. The porosity due to the rapid water evaporation and the decreased particle size, increases the surface areas. Increased surface area is beneficial for chemical reactions. During combustion, metal oxide particles will be formed from the metal hydroxide based product in the flame which has an density in the range of

1.6-1.9 g/cm^3 as compared to narrowly approaching 3.58 g/cm^3 by conventional metal oxide based additives.

Furthermore, during the combustion process very small nano-sized metal oxide particles will be formed by micro explosions in the flame when the nano-sized metal hydroxide particles are transformed to metal oxide. In addition, the micro explosions accelerate the crystals in all directions increasing speed frequency for the merging of the corrosive ash droplets.

Because of the formation of small, low density and porous metal oxide particles, the instant fuel composition inhibits deposit build-up from interfering with the heat transfer on the tubular walls and thus result in a higher energy out-put as compared to conventional metal oxide based products such as described in Cheng.

Moreover, the product as recited in claim 14 causes reduced and very soft deposits that are easy to remove during maintenance. This effect has clearly been demonstrated in the parallel test runs with a conventional high performance additive in the gas-turbine power plant as shown in Example 4.

Therefore, it is respectfully submitted that Cheng fails to teach or suggest all of the elements of claim 14. Accordingly, claim 14 is allowable over the cited prior art reference. Furthermore, claims 2, 3 and 8-16 depend from and further define the subject matter of claim 14 and therefore are also allowable.

For all of the foregoing reasons discussed above, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Aamer S. Ahmed
Registration No. 58,958

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 ASA:ajb
Facsimile: 202.756.8087
Date: May 13, 2009

Please recognize our Customer No. 20277 as our correspondence address.